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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,148	12/31/2001	Alon Ram	P-4468-US	3556

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EITAN, PEARL, LATZER & COHEN ZEDEK LLP  
10 ROCKEFELLER PLAZA, SUITE 1001  
NEW YORK, NY 10020

EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 05/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/032,148

**Applicant(s)**

RAM ET AL.

**Examiner**

Raymond S Dean

**Art Unit**

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 - 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 3, 7 - 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Townsend et al. (US 6,501,420 B2).

Regarding Claim 1, Townsend teaches a mobile unit comprising: a global positioning system (GPS) receiver to receive at least one signal from at least one satellite (Figure 1, Column 3 lines 3 – 5); a communication transceiver to communicate with a base station (Figure 1, Column 2 lines 60 – 63); and a data bus to carry a signal from said GPS receiver to a memory unit and to carry data from said communication transceiver to an audio/video apparatus (Figure 2, Column 2 lines 65 – 67, Column 3 lines 1 – 2, Column 3 lines 8 – 17, since the mobile phone has an audio/video apparatus there is an inherent data bus for carrying data from the communication transceiver to said audio/video apparatus).

Regarding Claim 2, Townsend teaches all of the claimed limitations recited in Claim 1. Townsend further teaches a controller able to regulate communication between the mobile unit and the base station (Figure 1, Column 2 lines 60 – 65, the microprocessor controls the communications transceiver thus said microprocessor is the controller).

Regarding Claim 3, Townsend teaches all of the claimed limitations recited in Claim 2. Townsend further teaches a GPS hardware unit to calculate pseudo-range information from the at least one satellite signal (Column 1 lines 64 – 66).

Regarding Claim 7, Townsend teaches all of the claimed limitations recited in Claim 3. Townsend further teaches wherein said communications transceiver transmits the pseudo range data to the base station (Column 3 lines 52 – 58).

Regarding Claim 8, Townsend teaches all of the claimed limitations recited in Claim 7. Townsend further teaches wherein said communication transceiver receives position data from the base station (Column 3 lines 52 – 58, since the mobile phone and the base station communicate via bi-directional links this is an inherent characteristic).

Regarding Claim 9, Townsend teaches all of the claimed limitations recited in Claim 1. Townsend further teaches wherein the communication transceiver does not transmit while the GPS receiver is receiving a signal (Column 1 lines 64 – 67, Column 2 lines 1 – 6).

Regarding Claim 10, Townsend teaches all of the claimed limitations recited in Claim 1. Townsend further teaches wherein the audio/video apparatus is a speaker or a visual display (Figure 2).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 – 6 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Townsend et al. (US 6,501,420 B2) in view of Nakagawa et al. (5,987,556).

Regarding Claim 4, Townsend teaches all of the claimed limitations recited in Claim 3. Townsend further teaches a processor to process the communication signal (Figure 1).

Townsend does not teach a digital signal processor.

Nakagawa teaches a digital signal processor (Column 7 lines 58 – 62).

Townsend and Nakagawa both teach mobile communication devices for use in a wireless cellular system thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to make a design preference and use the digital signal processor taught in Nakagawa in the mobile phone of Townsend as an alternative means for modulating/demodulating and encoding/decoding the digital data that is transmitted from/received by said mobile phone.

Regarding Claim 5, Townsend in view of Nakagawa teaches all of the claimed limitations recited in Claim 4. Townsend further teaches performing pseudo-range calculations (Column 1 lines 64 – 66).

Regarding Claim 6, Townsend teaches all of the claimed limitations recited in Claim 5. Nakagawa further teaches a processing accelerator (Figure 1).

5. Claims 11 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend et al. (US 6,501,420 B2) in view of Wallace et al. (6,147,653) and in further view of Nakagawa et al. (5,987,556).

Regarding Claim 11, Townsend teaches a system for determining location comprising: a mobile unit comprising: a GPS receiver to receive a signal from a satellite (Figure 1, Column 3 lines 3 – 5); a communication transceiver to communicate with a base station (Figure 1, Column 2 lines 60 – 63); and a data bus to carry a signal from said GPS receiver to a memory unit and to carry data from said communication transceiver to an audio/video apparatus (Figure 2, Column 2 lines 65 – 67, Column 3 lines 1 – 2, Column 3 lines 8 – 17, since the mobile phone has an audio/video apparatus there is an inherent data bus for carrying data from the communication transceiver to said audio/video apparatus); and a base station to communicate with said mobile unit and to calculate a position of said mobile unit based on data received from said mobile unit (Column 3 lines 52 – 58).

Townsend does not teach a dipole antenna.

Wallace teaches a dipole antenna (Figure 6, Column line 3).

Townsend and Wallace both teach a mobile phone thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the dipole antenna taught in Wallace on the mobile phone of Townsend for the purpose of

achieving a symmetric radiation pattern with uniform gain in the azimuth thus enabling said mobile phone to receive and transmit signals from and in all directions.

Townsend in view of Wallace does not teach time division multiple access.

Nakagawa teaches time division multiple access (Column 8 lines 7 – 9, GSM is a TDMA system).

Townsend in view of Wallace and Nakagawa teach a cellular system thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the time division multiple access method taught in Nakagawa in the cellular system of Townsend in view of Wallace for the purpose of enabling a plurality of mobile subscribers to communicate reliably.

Regarding Claim 12, Townsend in view of Wallace and in further view of Nakagawa teaches all of the claimed limitations recited in Claim 11. Townsend further teaches a controller to regulate communication between the mobile unit and the base station (Figure 1, Column 2 lines 60 – 65, the microprocessor controls the communications transceiver thus said microprocessor is the controller).

Regarding Claim 13, Townsend teaches all of the claimed limitations recited in Claim 12. Townsend further teaches a GPS hardware unit to calculate pseudo-range information from the at least the satellite signal (Column 1 lines 64 – 66).

Regarding Claim 14, Townsend teaches all of the claimed limitations recited in Claim 13. Nakagawa further teaches a digital signal processor to process the communication signal (Column 7 lines 58 – 62).

Regarding Claim 15, Nakagawa teaches all of the claimed limitations recited in Claim 14. Townsend further teaches performing pseudo-range calculations (Column 1 lines 64 – 66).

Regarding Claim 16, Townsend teaches all of the claimed limitations recited in Claim 15. Nakagawa further teaches a processing accelerator (Figure 1).

### ***Conclusion***

6. Any inquiry concerning this communication should be directed to Raymond S. Dean at telephone number (703) 305-8998.

If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745. Any response to this action should be mailed to:

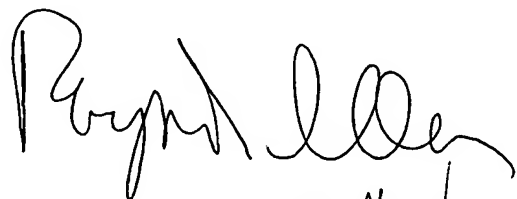
Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology center 2600 only)

Hand – delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



**NAY MAUNG**

**SUPERVISORY PATENT EXAMINER**